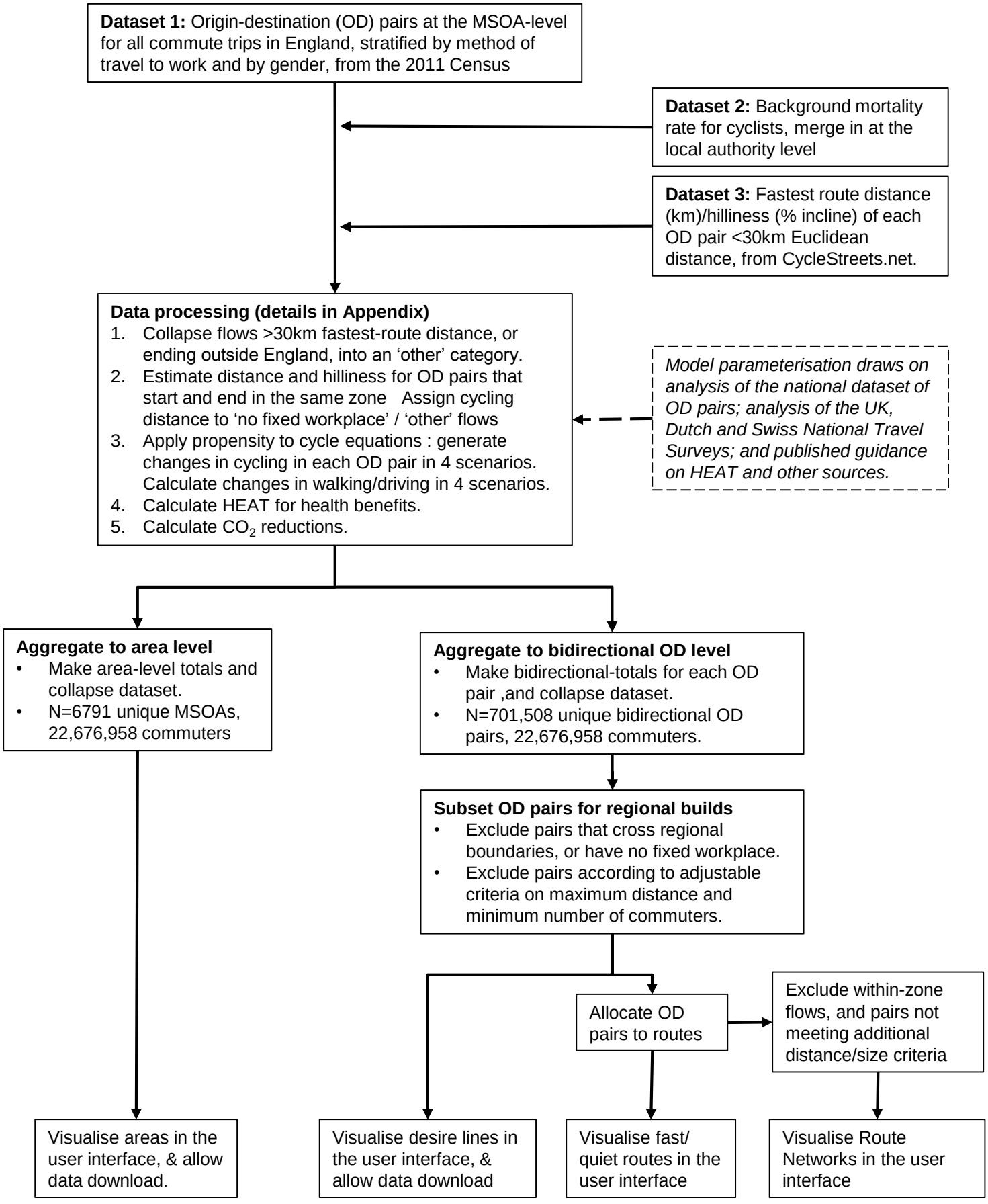
Dataset 1: Origin-destination (OD) pairs at the MSOA-level for all commute trips in England, stratified by method of travel to work and by gender, from the 2011 Census
Dataset 2: Background mortality rate for cyclists, merge in at the local authority level
Dataset 3: Fastest route distance (km)/hilliness (% incline) of each OD pair <30km Euclidean distance, from CycleStreets.net.
Data processing (details in Appendix)
1. Collapse flows >30km fastest-route distance, or ending outside England, into an 'other' category.
2. Estimate distance and hilliness for OD pairs that start and end in the same zone Assign cycling distance to 'no fixed workplace' / 'other' flows
3. Apply propensity to cycle equations : generate changes in cycling in each OD pair in 4 scenarios. Calculate changes in walking/driving in 4 scenarios.
4. Calculate HEAT for health benefits.
5. Calculate CO_2 reductions.
Model parameterisation draws on analysis of the national dataset of OD pairs; analysis of the UK, Dutch and Swiss National Travel Surveys; and published guidance on HEAT and other sources.
Aggregate to area level
• Make area-level totals and collapse dataset.
• N=6791 unique MSOAs, 22,676,958 commuters
Aggregate to bidirectional OD level
• Make bidirectional-totals for each OD pair ,and collapse dataset.
• N=701,508 unique bidirectional OD pairs, 22,676,958 commuters.
Subset OD pairs for regional builds
• Exclude pairs that cross regional boundaries, or have no fixed workplace.
• Exclude pairs according to adjustable criteria on maximum distance and minimum number of commuters.
Allocate OD pairs to routes
Exclude within-zone flows, and pairs not meeting additional distance/size criteria
Visualise areas in the user interface, & allow data download.
Visualise desire lines in the user interface, & allow data download
Visualise fast/ quiet routes in the user interface
Visualise Route Networks in the user interface